
Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2010; month=10; day=6; hr=12; min=50; sec=38; ms=553;]

Validated By CRFValidator v 1.0.3

Application No: 10574333 Version No: 2.0

Input Set:

Output Set:

Started: 2010-09-28 18:20:11.175

Finished: 2010-09-28 18:20:21.595

Elapsed: 0 hr(s) 0 min(s) 10 sec(s) 420 ms

Total Warnings: 98

Total Errors: 0

No. of SeqIDs Defined: 134

Actual SeqID Count: 134

Erro	or code	Error Description									
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(21)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(22)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(23)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(24)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(25)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(26)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(27)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(28)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(29)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(30)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(31)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(32)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(33)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(34)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(35)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(36)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(37)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(38)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(39)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(40)

Input Set:

Output Set:

Started: 2010-09-28 18:20:11.175 **Finished:** 2010-09-28 18:20:21.595

_.

Elapsed: 0 hr(s) 0 min(s) 10 sec(s) 420 ms

Total Warnings: 98
Total Errors: 0

No. of SeqIDs Defined: 134

Actual SeqID Count: 134

Error Description

Error code

This error has occured more than 20 times, will not be displayed

SEQUENCE LISTING

<110>	The Regents of the University of California Karin, Michael Bonizzi, Giussepina Bebien, Mahali												
<120>	Compositions and Methods for Gene Expression												
<130>	UCSD-10835												
	10574333 2010-09-28												
<150> <151>	US 60/508349 2003-10-01												
	PCT/US2004/032246 2004-09-29												
<160>	134												
<170>	PatentIn version 3.5												
	1 700 DNA Mus musculus												
<400>	1												
ttcgtad	ccat ccacccaccc ccagtcgaga gaataggggt acagagggga ggtggcaaag	60											
aaaatto	cacg atactgagta tetetgggag acetgtttgg tetetttget eggtagegea	120											
gccctad	cgtt agaatgcatc ttcccgggaa tgactgtagt gagactttgg ctgggaatcc	180											
aagttat	ttct aactgtagat tggtccacgt tgccctaagc ctagcagtcc actgcggcac	240											
agacaco	cctg gacatgaggt gggtcagctt aagttcctgg cacgaaagaa agggtactct	300											
ggcaact	tttt ggatgcggcg aaacagactg tttcgtctct caggttctta tttcacggct	360											
tgtgcct	tttg acageceett agttteteta tetgeaggat gggageatta agetetaega	420											
cccagc	ctct ttacaattca ggtccaaaga gcccgcccaa gttggggact gggaagatca	480											
aaggtct	tcag cacccagcgg agccgcggac actgagggcg ccaagaaggg ggtgggtagg	540											
tagggaa	actg gaagggegge tgeteegeag gggatgegeg teagagaeee eageeaeaet	600											
ccaggc	ccgc cccttgatga gccccgcccc gccccgcctg gttttcgcct ctaaagcgcc	660											
cagcgct	tege etecegetge egeaetttea eteteggtee	700											

```
<211> 10
<212> DNA
<213> Mus musculus
<400> 2
gggagacctg
<210> 3
<211> 933
<212> PRT
<213> Homo sapiens
<400> 3
Met Glu Ser Cys Tyr Asn Pro Gly Leu Asp Gly Ile Ile Glu Tyr Asp
1 5
              10
Asp Phe Lys Leu Asn Ser Ser Ile Val Glu Pro Lys Glu Pro Ala Pro
      20 25 30
Glu Thr Ala Asp Gly Pro Tyr Leu Val Ile Val Glu Gln Pro Lys Gln
   35 40
Arg Gly Phe Arg Phe Arg Tyr Gly Cys Glu Gly Pro Ser His Gly Gly
  50
          55
Leu Pro Gly Ala Ser Ser Glu Lys Gly Arg Lys Thr Tyr Pro Thr Val
65 70 75 80
Lys Ile Cys Asn Tyr Glu Gly Pro Ala Lys Ile Glu Val Asp Leu Val
          85
                         90
Thr His Ser Asp Pro Pro Arg Ala His Ala His Ser Leu Val Gly Lys
  100 105 110
Gln Cys Ser Glu Leu Gly Ile Cys Ala Val Ser Val Gly Pro Lys Asp
   115 120
Met Thr Ala Gln Phe Asn Asn Leu Gly Val Leu His Val Thr Lys Lys
 130 135 140
Asn Met Met Gly Thr Met Ile Gln Lys Leu Gln Arg Gln Arg Leu Arg
                   155
145 150
```

Ser Arg Pro Gln Gly Leu Thr Glu Ala Glu Gln Arg Glu Leu Glu Gln

170

165

1.0

Glu	Ala	Lys	Glu 180	Leu	Lys	Lys	Val	Met 185	Asp	Leu	Ser	Ile	Val 190	Arg	Leu
Arg	Phe	Ser 195	Ala	Phe	Leu	Arg	Ala 200	Ser	Asp	Gly	Ser	Phe 205	Ser	Leu	Pro
Leu	Lys 210	Pro	Val	Thr	Ser	Gln 215	Pro	Ile	His	Asp	Ser 220	Lys	Ser	Pro	Gly
Ala 225	Ser	Asn	Leu	Lys	Ile 230	Ser	Arg	Met	Asp	Lys 235	Thr	Ala	Gly	Ser	Val 240
Arg	Gly	Gly	Asp	Glu 245	Val	Tyr	Leu	Leu	Cys 250	Asp	Lys	Val	Gln	Lys 255	Asp
Asp	Ile	Glu	Val 260	Arg	Phe	Tyr	Glu	Asp 265	Asp	Glu	Asn	Gly	Trp 270	Gln	Ala
Phe	Gly	Asp 275	Phe	Ser	Pro	Thr	Asp 280	Val	His	Lys	Gln	Tyr 285	Ala	Ile	Val
Phe	Arg 290	Thr	Pro	Pro	Tyr	His 295	Lys	Met	Lys	Ile	Glu 300	Arg	Pro	Val	Thr
Val 305	Phe	Leu	Gln	Leu	Lys 310	Arg	Lys	Arg	Gly	Gly 315	Asp	Val	Ser	Asp	Ser 320
Lys	Gln	Phe	Thr	Tyr 325	Tyr	Pro	Leu	Val	Glu 330	Asp	Lys	Glu	Glu	Val 335	Gln
Arg	Lys	Arg	Arg 340	Lys	Ala	Leu	Pro	Thr 345	Phe	Ser	Gln	Pro	Phe 350	Gly	Gly
Gly	Ser	His 355	Met	Gly	Gly	Gly	Ser 360	Gly	Gly	Ala	Ala	Gly 365	Gly	Tyr	Gly
Gly	Ala 370	Gly	Gly	Gly	Gly	Ser 375	Leu	Gly	Phe	Phe	Pro 380	Ser	Ser	Leu	Ala
Tyr 385	Ser	Pro	Tyr	Gln	Ser 390	Gly	Ala	Gly	Pro	Met 395	Arg	Суз	Tyr	Pro	Gly 400

Gly	Gly	Gly	Gly	Ala 405	Gln	Met	Ala	Ala	Thr 410	Val	Pro	Ser	Arg	Asp 415	Ser
Gly	Glu	Glu	Ala 420	Ala	Glu	Pro	Ser	Ala 425	Pro	Ser	Arg	Thr	Pro 430	Gln	Суз
Glu	Pro	Gln 435	Ala	Pro	Glu	Met	Leu 440	Gln	Arg	Ala	Arg	Glu 445	Tyr	Asn	Ala
Arg	Leu 450	Phe	Gly	Leu	Ala	His 455	Ala	Ala	Pro	Ser	Pro 460	Thr	Arg	Leu	Leu
Arg 465	His	Arg	Gly	Arg	Arg 470	Ala	Leu	Leu	Ala	Gly 475	Gln	Arg	His	Leu	Leu 480
Thr	Ala	Gln	Asp	Glu 485	Asn	Gly	Asp	Thr	Pro 490	Leu	His	Leu	Ala	Ile 495	Ile
His	Gly	Gln	Thr 500	Ser	Val	Ile	Glu	Gln 505	Ile	Val	Tyr	Val	Ile 510	His	His
Ala	Gln	Asp 515	Leu	Gly	Val	Val	Asn 520	Leu	Thr	Asn	His	Leu 525	His	Gln	Thr
Pro	Leu 530	His	Leu	Ala	Val	Ile 535	Thr	Gly	Gln	Thr	Ser 540	Val	Val	Ser	Phe
Leu 545	Leu	Arg	Val	Gly	Ala 550	Asp	Pro	Ala	Leu	Leu 555	Asp	Arg	His	Gly	Asp 560
Ser	Ala	Met	His	Leu 565	Ala	Leu	Arg	Ala	Gly 570	Ala	Gly	Ala	Pro	Glu 575	Leu
Leu	Arg	Ala	Leu 580	Leu	Gln	Ser	Gly	Ala 585	Pro	Ala	Val	Pro	Gln 590	Leu	Leu
His	Met	Pro 595	Asp	Phe	Glu	Gly	Leu 600	Tyr	Pro	Val	His	Leu 605	Ala	Val	Arg
Ala	Arg 610	Ser	Pro	Glu	Cys	Leu 615	Asp	Leu	Leu	Val	Asp 620	Ser	Gly	Ala	Glu

Val 625	Glu	Ala	Thr	Glu	Arg 630	Gln	Gly	Gly	Arg	Thr 635	Ala	Leu	His	Leu	Ala 640
Thr	Glu	Met	Glu	Glu 645	Leu	Gly	Leu	Val	Thr 650	His	Leu	Val	Thr	Lys 655	Leu
Arg	Ala	Asn	Val 660	Asn	Ala	Arg	Thr	Phe 665	Ala	Gly	Asn	Thr	Pro 670	Leu	His
Leu	Ala	Ala 675	Gly	Leu	Gly	Tyr	Pro 680	Thr	Leu	Thr	Arg	Leu 685	Leu	Leu	Lys
Ala	Gly 690	Ala	Asp	Ile	His	Ala 695	Glu	Asn	Glu	Glu	Pro 700	Leu	Cys	Pro	Leu
Pro 705	Ser	Pro	Pro	Thr	Ser 710	Asp	Ser	Asp	Ser	Asp 715	Ser	Glu	Gly	Pro	Glu 720
Lys	Asp	Thr	Arg	Ser 725	Ser	Phe	Arg	Gly	His 730	Thr	Pro	Leu	Asp	Leu 735	Thr
Cys	Ser	Thr	Leu 740	Val	Lys	Thr	Leu	Leu 745	Leu	Asn	Ala	Ala	Gln 750	Asn	Thr
Met	Glu	Pro 755	Pro	Leu	Thr	Pro	Pro 760	Ser	Pro	Ala	Gly	Pro 765	Gly	Leu	Ser
Leu	Gly 770	Asp	Thr	Ala	Leu	Gln 775	Asn	Leu	Glu	Gln	Leu 780	Leu	Asp	Gly	Pro
Glu 785	Ala	Gln	Gly	Ser	Trp 790	Ala	Glu	Leu	Ala	Glu 795	Arg	Leu	Gly	Leu	Arg 800
Ser	Leu	Val	Asp	Thr 805	Tyr	Arg	Gln	Thr	Thr 810	Ser	Pro	Ser	Gly	Ser 815	Leu
Leu	Arg	Ser	Tyr 820	Glu	Leu	Ala	Gly	Gly 825	Asp	Leu	Ala	Gly	Leu 830	Leu	Glu
Ala	Leu	Ser 835	Asp	Met	Gly	Leu	Glu 840	Glu	Gly	Val	Arg	Leu 845	Leu	Arg	Gly

Pro Glu Thr Arg Asp Lys Leu Pro Ser Thr Glu Val Lys Glu Asp Ser

850 855 860

Ala Tyr Gly Ser Gln Ser Val Glu Gln Glu Ala Glu Lys Leu Gly Pro 865 870 875 880

Pro Pro Glu Pro Pro Gly Gly Leu Ser His Gly His Pro Gln Pro Gln
885 890 895

Val Thr Asp Leu Leu Pro Ala Pro Ser Pro Leu Pro Gly Pro Pro Val 900 905 910

Gln Arg Pro His Leu Phe Gln Ile Leu Phe Asn Thr Pro His Pro Pro 915 920 925

Leu Ser Trp Asp Lys 930

<210> 4

<211> 3001

<212> DNA

<213> Homo sapiens

<400> 4

actttcctgc cccttccccg gccaagccca actccggatc tcgctctcca ccggatctca 60 cccgccacac ccggacaggc ggctggagga ggcgggcgtc taaaattctg ggaagcagaa 120 180 cctggccgga gccactagac agagccgggc ctagcccaga gacatggaga gttgctacaa cccaggtctg gatggtatta ttgaatatga tgatttcaaa ttgaactcct ccattgtgga acccaaggag ccagcccag aaacagctga tggcccctac ctggtgatcg tggaacagcc 300 taagcagaga ggcttccgat ttcgatatgg ctgtgaaggc ccctcccatg gaggactgcc 360 cggtgcctcc agtgagaagg gccgaaagac ctatcccact gtcaagatct gtaactacga 420 gggaccagec aagategagg tggacetggt aacacacagt gacccacete gtgeteatge 480 ccacagtctg gtgggcaagc aatgctcgga gctggggatc tgcgccgttt ctgtggggcc 540 caaggacatg actgcccaat ttaacaacct gggtgtcctg catgtgacta agaagaacat 600 gatggggact atgatacaaa aacttcagag gcagcggctc cgctctaggc cccagggcct 660 tacggaggcc gagcagcggg agctggagca agaggccaaa gaactgaaga aggtgatgga tetgagtata gtgeggetge gettetetge etteettaga gecagtgatg geteettete 780 840 cctgccctg aagccagtca cctcccagcc catccatgat agcaaatctc cgggggcatc

aaacctgaag atttctcgaa	tggacaagac	agcaggctct	gtgcggggtg	gagatgaagt	900
ttatctgctt tgtgacaagg	tgcagaaaga	tgacattgag	gttcggttct	atgaggatga	960
tgagaatgga tggcaggcct	ttggggactt	ctctcccaca	gatgtgcata	aacagtatgc	1020
cattgtgttc cggacacccc	cctatcacaa	gatgaagatt	gageggeetg	taacagtgtt	1080
tctgcaactg aaacgcaagc	gaggaggga	cgtgtctgat	tccaaacagt	tcacctatta	1140
ccctctggtg gaagacaagg	aagaggtgca	gcggaagcgg	aggaaggcct	tgcccacctt	1200
ctcccagccc ttcgggggtg	gctcccacat	gggtggaggc	tctgggggtg	cagccggggg	1260
ctacggagga gctggaggag	gtggcagcct	cggtttcttc	ccctcctccc	tggcctacag	1320
cccctaccag tccggcgcgg	gececatgeg	gtgctacccg	ggaggcgggg	gcggggcgca	1380
gatggccgcc acggtgccca	gcagggactc	cggggaggaa	gccgcggagc	cgagcgcccc	1440
ctccaggacc ccccagtgcg	agccgcaggc	cccggagatg	ctgcagcgag	ctcgagagta	1500
caacgcgcgc ctgttcggcc	tggcgcacgc	agccccgagc	cctactcgac	tactgcgtca	1560
ccgcggacgc cgcgcgctgc	tggcgggaca	gcgccacctg	ctgacggcgc	aggacgagaa	1620
cggagacaca ccactgcacc	tagccatcat	ccacgggcag	accagtgtca	ttgagcagat	1680
agtctatgtc atccaccacg	cccaggacct	cggcgttgtc	aacctcacca	accacctgca	1740
ccagacgccc ctgcacctgg	cggtgatcac	ggggcagacg	agtgtggtga	gctttctgct	1800
gcgggtaggt gcagacccag	ctctgctgga	tcggcatgga	gactcagcca	tgcatctggc	1860
gctgcgggca ggcgctggtg	ctcctgagct	gctgcgtgca	ctgcttcaga	gtggagctcc	1920
tgctgtgccc cagctgttgc	atatgcctga	ctttgaggga	ctgtatccag	tacacctggc	1980
ggtccgagcc cgaagccctg	agtgcctgga	tctgctggtg	gacagtgggg	ctgaagtgga	2040
ggccacagag cggcaggggg	gacgaacagc	cttgcatcta	gccacagaga	tggaggagct	2100
ggggttggtc acccatctgg	tcaccaagct	ccgggccaac	gtgaacgctc	gcacctttgc	2160
gggaaacaca cccctgcacc	tggcagctgg	actggggtac	ccgaccctca	cccgcctcct	2220
tctgaaggct ggtgctgaca	tccatgctga	aaacgaggag	cccctgtgcc	cactgccttc	2280
accccctacc tctgatagcg	actcggactc	tgaagggcct	gagaaggaca	cccgaagcag	2340
cttccggggc cacacgcctc	ttgacctcac	ttgcagcacc	ttggtgaaga	ccttgctgct	2400
aaatgctgct cagaacacca	tggagccacc	cctgaccccg	cccagcccag	cagggccggg	2460
actgtcactt ggtgatacag	ctctgcagaa	cctggagcag	ctgctagacg	ggccagaagc	2520
ccagggcagc tgggcagagc	tggcagagcg	tctggggctg	cgcagcctgg	tagacacgta	2580

ccgacagaca	acctcaccca	gtggcagcct	cctgcgcagc	tacgagctgg	ctggcgggga	2640
cctggcaggt	ctactggagg	ccctgtctga	catgggccta	gaggaggag	tgaggctgct	2700
gaggggtcca	gaaacccgag	acaagctgcc	cagcacagag	gtgaaggaag	acagtgcgta	2760
cgggagccag	tcagtggagc	aggaggcaga	gaagetggge	ccaccccctg	agccaccagg	2820
agggctctcg	cacgggcacc	cccagcctca	ggtgactgac	ctgctgcctg	ccccagccc	2880
ccttcccgga	ccccctgtac	agcgtcccca	cctatttcaa	atcttattta	acaccccaca	2940
cccacccctc	agttgggaca	aataaaggat	tctcatggga	aggggaggac	cccgaattcc	3000
t						3001

<210> 5

<211> 899

<212> PRT

<213> Mus musculus

<400> 5

Met Asp Asn Cys Tyr Asp Pro Gly Leu Asp Gly Ile Pro Glu Tyr Asp 1 5 10 15

Asp Phe Glu Phe Ser Pro Ser Ile Val Glu Pro Lys Asp Pro Ala Pro 20 25 30

Glu Thr Ala Asp Gly Pro Tyr Leu Val Ile Val Glu Gln Pro Lys Gln 35 40 45

Arg Gly Phe Arg Phe Arg Tyr Gly Cys Glu Gly Pro Ser His Gly Gly 50 55

Leu Pro Gly Ala Ser Ser Glu Lys Gly Arg Lys Thr Tyr Pro Thr Val
65 70 75 80

Lys Ile Cys Asn Tyr Glu Gly Pro Ala Lys Ile Glu Val Asp Leu Val 85 90 95

Thr His Ser Asp Pro Pro Arg Ala His Ala His Ser Leu Val Gly Lys 100 105 110

Gln Cys Ser Glu Leu Gly Val Cys Ala Val Ser Val Gly Pro Lys Asp \$115\$ \$120\$ \$125\$

Met	Thr 130	Ala	Gln	Phe	Asn	Asn 135	Leu	Gly	Val	Leu	His 140	Val	Thr	Lys	Lys
Asn 145	Met	Met	Glu	Ile	Met 150	Ile	Gln	Lys	Leu	Gln 155	Arg	Gln	Arg	Leu	Arg 160
Ser	Lys	Pro	Gln	Gly 165	Leu	Thr	Glu	Ala	Glu 170	Arg	Arg	Glu	Leu	Glu 175	Gln
		_	180		_	_		185				Ile	190		
		195					200					Phe 205			
	210					215					220	Lys			
225					230					235		Val			240
				245					250			Gly		255	
Phe	Gly	Asp	260 Phe	Ser	Pro	Thr	Asp	265 Val	His	Lys	Gln	Tyr	270 Ala	Ile	Val
Phe	_	275 Thr	Pro	Pro	Tyr		280 Lys	Met	Lys	Ile		285 Arg	Pro	Val	Thr
	290 Phe	Leu	Gln	Leu	_	295 Arg	Lys	Arg	Gly	_	300 Asp	Val	Ser	Asp	
305 Lys	Gln	Phe	Thr	Tyr 325	310 Tyr	Pro	Leu	Val		315 Asp	Lys	Glu	Glu		320 Gln
Arg	Lys	Arg	Arg 340		Ala	Leu	Pro	Thr 345	330 Phe	Ser	Gln	Pro	Phe 350	335 Gly	Gly

Gly Ser His Met Gly Gly Gly Ser Gly Gly Ser Ala Gly Gly Tyr Gly

Gly Gly Gly Ala Gln Met Ala Gly Ser Arg Arg Asp Thr Asp Ala \$405\$

Gly Glu Gly Ala Glu Glu Pro Arg Thr Pro Pro Glu Ala Pro Gln Gly 420 425 430

Glu Pro Gln Ala Leu Asp Thr Leu Gln Arg Ala Arg Glu Tyr Asn Ala 435 440 445

Arg Leu Phe Gly Leu Ala Gln Arg Ser Ala Arg Ala Leu Leu Asp Tyr 450 455 460

Gly Val Thr Ala Asp Ala Arg Ala Leu Leu Ala Gly Gln Arg His Leu 465 470 475 480

Leu Met Ala Gln Asp Glu Asn Gly Asp Thr Pro Leu His Leu